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## ABSTRACT

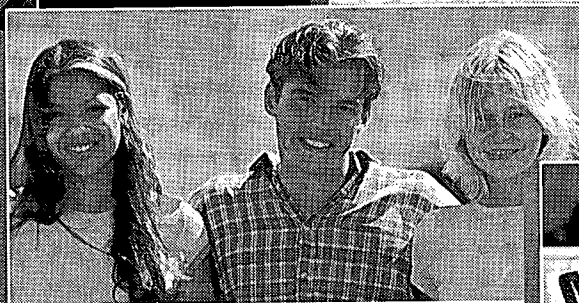
In 1996, the Texas State Board of Education adopted the "Long-Range Plan for Technology, 1996-2010," and presented it to the Legislature. In 1998, the first progress report for this revised long-range plan was produced; it detailed the period from September 1996 through August 1998. This second progress report documents accomplishments and activities from September 1998 through August 2000. Highlighted in this report are the collaborations and progress made by the Texas public schools, regional education service centers and the Texas Education Agency toward implementation of this updated plan. This report describes progress on previous initiatives as well as on new projects being undertaken each year. The current Long-Range Plan includes four sections: Teaching and Learning; Educator Preparation and Development; Administration and Support Services; and Infrastructure for Technology. Progress in each of these areas is reported, followed by a discussion of services provided by Texas' 20 education service centers. A timeline of events and accomplishments is provided, beginning with the time period September 1983 through August 1984 and ending with the period September 1998 through August 2000. Descriptions of several initiatives of the Long-Range plan are also given with reports on current status. (AEF)



# A Report to the 77th Texas Legislature

## PROGRESS REPORT ON THE LONG-RANGE PLAN FOR TECHNOLOGY, 1996-2010

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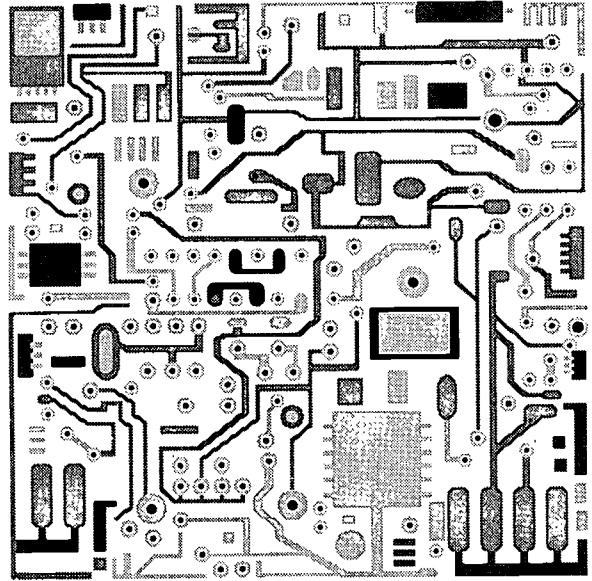
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# PROGRESS REPORT ON THE LONG-RANGE PLAN FOR TECHNOLOGY, 1996-2010



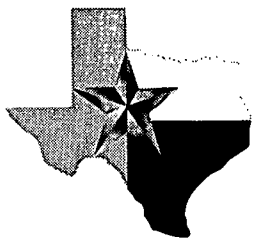
*A Report to the  
77<sup>th</sup> Texas Legislature  
from the  
Texas Education Agency  
December 1, 2000*

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*Submitted to the Governor,  
Lieutenant Governor,  
Speaker of the House of  
Representatives  
and the members of the  
Seventy-Seventh Texas Legislature*





# TEXAS EDUCATION AGENCY

1701 North Congress Ave. ★ Austin, Texas 78701-1494 ★ 512/463-9734 ★ FAX: 512/463-9838 ★ <http://www.tea.state.tx.us>

Jim Nelson  
Commissioner of Education

December 2000

The Honorable George W. Bush, Governor of Texas  
The Honorable Rick Perry, Lieutenant Governor of Texas  
The Honorable Pete Laney, Speaker of the House of Representatives  
Members of the 77th Texas Legislature

I am pleased to share with you the second progress report for the *Long-Range Plan for Technology, 1996-2010*.

The Texas Education Code, Section 32.001, required the State Board of Education to develop a long-range plan for technology. The resulting *Long-Range Plan for Technology, 1988-2000* was adopted by the Board in November 1988. The measure also required that biennial reports be completed and provided to the governor and Legislature on the progress toward implementation of this plan.

In the dozen years since that first plan was adopted, changes in existing technologies and the emergence of new technologies created new and different opportunities for schools. Changes in legislation created more control at the district level, giving districts greater opportunities to make decisions regarding technology than ever before. An update to the first plan clearly was necessary, and, in 1996, the State Board of Education adopted the *Long-Range Plan for Technology, 1996-2010* and presented it to the Legislature. In 1998, the first progress report for the revised long-range plan was produced; it detailed the period from September 1996 through August 1998.

This second progress report on the *Long-Range Plan for Technology, 1996-2010* documents accomplishments and activities from September 1998 through August 2000. Highlighted in this report are the collaborations and progress made by the Texas public schools, regional education service centers and the Texas Education Agency toward implementation of this updated plan. This report describes progress on previous initiatives as well as on new projects being undertaken each year.

I hope you will find the efforts described in this report as illuminating as I do.

Respectfully,

Jim Nelson  
Commissioner of Education

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# Executive Management

**Jim Nelson**

Commissioner of Education

**Arturo Almendarez**

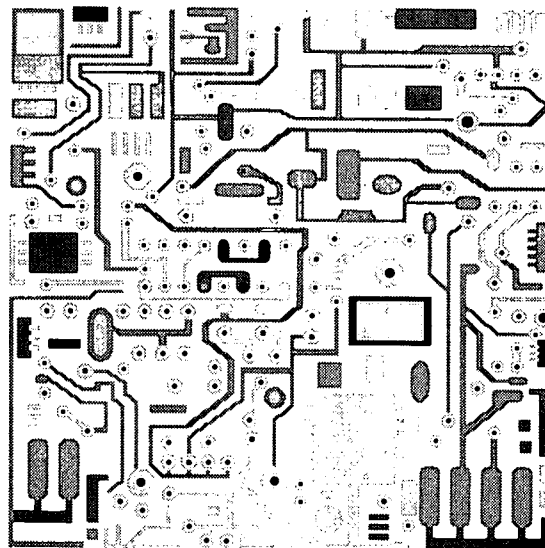
Deputy Commissioner  
Programs and Instruction

**Ann Smisko**

Associate Commissioner, Curriculum  
Assessment and Technology

**Anita Givens**

Senior Director  
Educational Technology

**Project Director**

Kate Loughrey  
Assistant Division Director  
Educational Technology

**Project Staff of the  
Division of Educational Technology**

Delia Duffey  
Keith Elliott  
Karen Kahan  
Richard LaGow  
Mary Lankford  
Nancy Little  
John Lopez  
Gloria McClanahan  
Kathy Mihalik  
Marie Soto  
Terry Wyatt

The Office of Educational Technology wishes to thank  
all Agency staff who contributed to this report.

A more comprehensive report detailing the progress made in the implementation of the  
*Long-Range Plan for Technology, 1996-2010* from September 1998 through August 2000  
will be published in Spring 2001 in print and on the Agency website.

# Executive Summary

## *Progress Report on the Long-Range Plan for Technology, 1996-2010*

When looking at anything but technology, two years does not seem like much time. Two years ago, many of us had the same jobs, the same cars, and lived in places that look pretty much as they do now. Two years isn't enough time to see the major changes that can take place...except in technology.

In technology, two years can be the lifespan of a version of software or the latest modem connection speed. Ideas that seemed impossibly fresh and challenging two years ago are part of our everyday experience, while resources that were out of reach have now earned a place in our offices, classrooms and libraries.

A lot has changed in Texas schools' use of technology over the past two years.

This progress report of the *Long-Range Plan for Technology, 1996-2010* covers the period from September 1, 1998 through August 31, 2000. The Long-Range Plan for Technology came into being in 1985, when new legislation charged the State Board of Education with developing and adopting a plan to guide Texas' progress in using technology in schools. The *Long-Range Plan for Technology, 1988-2000* served as a blueprint for providing students and teachers with tools to gain the knowledge and skills required for teaching, learning and working in the 21st century. The plan established technology as an essential priority in achieving equitable access to information and resources for all Texas schools.

In 1995, changes in legislation, developments in technology, changing expectations of business and industry, higher education changes, and community needs dictated that the plan be updated. The Commissioner of Education appointed a task force to re-examine the plan, and the resulting update was adopted by the State Board of Education and presented to the Texas Legislature in 1996.

The *Long-Range Plan for Technology, 1996-2010* makes requests of the Legislature, delineates actions the Texas Education Agency should undertake and makes recommendations to other entities—state agencies, regional education service centers (ESCs), local school districts, institutions of higher education, communities and the private sector.

The current *Long-Range Plan* includes four sections:

- ◆ Teaching and Learning
- ◆ Educator Preparation and Development
- ◆ Administration and Support Services
- ◆ Infrastructure for Technology

The Teaching and Learning section of this report addresses the need for instructionally sound technology-based materials to promote student learning. It also addresses teacher access to educational accountability data and other resources to help teachers carry out successful planning and instruction.

Educator Preparation and Development examines efforts and initiatives to prepare preservice and inservice teachers and other instructional staff members for using technology most effectively in our schools.

Administration and Support Services describes the efforts undertaken to work with administrators, educators and other school staff members to deliver and streamline functions these individuals need to do their jobs efficiently and effectively.

None of these efforts can be carried out without the appropriate equipment, connectivity and people. Infrastructure for Technology addresses gains made in these areas.

Although these four sections stand alone, they cannot be completely separated. Some common concepts are threaded throughout, as well as common resources that meet goals in each of the sections. The repeated themes and resources emphasize how essential a cohesive, integrated technology effort is to the continual improvement of our education system.

Significant progress has been made in reaching the goals outlined in the *Long-Range Plan*. We see the Texas Essential Knowledge and Skills (TEKS) curriculum, which became effective September 1, 1998, guiding districts, campuses and educators as they make the decisions about how and when students will learn. With Technology Applications as a significant part of the TEKS—woven throughout the expectations for what students should know and be able to do—we find technological advances taking place at every grade, in every classroom. Students are using email, the Web and multimedia presentations to complete assignments. Graduates are leaving high school with at least one Technology Applications credit completed in courses such as Digital Graphics/Animation and Web Mastering. Educators are getting the support they need to continue as learners themselves, finding assistance from nontraditional sources such as distance learning available through satellite, videoconferencing or the Internet.

Educators—both preservice and inservice—are finding more support for technology than ever before. New Examinations for the Certification of Educators (ExCETs) in Texas will ensure that our children's teachers are better prepared for today's classrooms. As expectations for student learning have been raised with the implementation of the TEKS, expectations for teachers will also be raised with these examinations, and with mandatory standards for Technology Applications knowledge and skills. In addition, teachers and librarians are increasingly connected to the Web, finding resources in the Texas Beginning Educator Support System, Centers for Educator Development, and the Texas Library Connection (TLC). In addition, the Texas Education Telecommunications Network (TETN) connects "Lone Star librarians"—those who fill the lone library position in a district—to offer them training and communication opportunities they never had before.

The use of technology for specific needs of administrative and support services staff members continues to evolve. Administrative use of technology in schools and districts can save tremendous

resources. We see new and revised ways to use business applications online, such as the enhanced accessibility of the Academic Excellence Indicator System (AEIS), the Public Education Information Management System (PEIMS), and the AskTED function on the Texas Education Agency website, as well as Educational Materials Online (E-MAT), which has offered the ability to order textbooks electronically since September 1998. Up-to-date systems for technical support are in place, ensuring best use of TETN and the Texas School Telecommunications Access Resource (T-STAR) with a minimum of down time. Reliable funding from the Technology Allotment and Library Supplemental Funds also helps bring goals within reach.

The state continues to put into place a comprehensive technology system with voice, video and data capabilities. The Texas Education Agency's strategic plan to meet the *Long-Range Plan's* goals—the Public Access Initiative—has shown significant progress over the past two years. The new Public Education Data Warehouse provides, in a clearinghouse format, searchable key information education stakeholders need about student performance and school finances, among other data. The TETN and T-STAR systems, currently being upgraded, continue to save money on district travel and to deliver "just in time" professional development. In addition, the human infrastructure that supports the technology is growing.

Now, four years into the current *Long-Range Plan*, we can see how the development and implementation of technology in our schools has reached an unprecedented level of sophistication. Teachers at all levels are becoming familiar with technology, using technology for professional development, and discovering how technology may best help their students learn. Administrators, librarians and other school staff members are saving time, money and resources with business applications, support, and professional development of their own. Districts are seeing an equalization of resources between smaller, rural areas and larger, urban communities. Education organizations and other entities are able to make a bigger and more consistent impact by using technology to deliver resources to districts and campuses.

Most importantly, students are using technology every day, becoming proficient and comfortable with the tools that have become so widely established in recent years and will remain critical well into this century and beyond.



# Teaching and Learning

The traditional model of schooling—the image so many of us carry in our minds—shows us a teacher in front of a classroom, choosing what is to be taught and then delivering that content to a room full of students. The tools used are chalk and erasers. This model and those tools are changing with the start of the 21st century to show us the teacher as facilitator of learning, guiding students in their own pathways to learning and using tools that were unimagined when we were students.

Technology has brought about this change.

We see a shift since the last *Progress Report on the Long-Range Plan for Technology*. With much of the technology infrastructure in place—computers in the classroom, videoconferencing for learning and professional development, online educator resources—the state's efforts turn from gaining the tools to exploring how best to use them and to keeping them up to date.

The structure of these efforts is provided in large part by the Texas Essential Knowledge and Skills (TEKS) curriculum, which became effective September 1, 1998, the first day of the time period covered by this progress report. Much of what we now see changing throughout the state is a result of this new curriculum. The TEKS weave expectations for technology learning and use throughout the K-12 learning process, reinventing what we think of as the traditional teacher-to-student instructional model.

Teachers, rather than standing at the front of the classroom and directing their classes as a single body, are gaining more freedom to assist individual students as they seek out knowledge and learn to use computers and technology to guide their own learning. Students, rather than simply learning to operate computers and launch programs, are learning how to use technological tools to find, compile and present information.

Today, not only do we find technology expectations defined in the TEKS and in the Technology Applications enrichment curriculum, but we also find opportunities for technology learning in all aspects of the curriculum. These curricula were developed and are used with the understanding that technology fluency is no longer a plus in our society, but a necessity. They provide a framework for preparing students for the future. All Texas students are required to earn one Technology Applications

graduation credit. Enrollment in Technology Applications courses increases each year.

Similarly, during the past few years, the library as a school resource has been revisited. Technology integration in schools has brought the school librarian/media specialist front and center in the learning process, allowing for greater collaboration with teachers in a team-teaching model. In addition, new School Library Standards adopted by the Texas State Library in consultation with TEA strive not only to make resources more easily available to students, but also to assist librarians in acquiring and maintaining the best possible resources. The Texas Library Connection (TLC), a statewide initiative, provides online, full-text versions of magazines, newspapers and journals to students and teachers and gives users access to resources in libraries across the state.

The equalization of resources for schools—no matter their location or size—further exemplifies the benefit technology use has provided. Small and rural schools using the TLC Union Catalog, have access to 44 million items available through interlibrary loan. Distance learning opportunities are another equalizing factor. Through satellite, videoconferencing, and the Internet, students and teachers can take advantage of expanded learning opportunities that were previously unaffordable. For example, with the Texas School Telecommunications Access Resource, or T-STAR, even small and rural schools with limited budgets can offer students Advanced Placement and specialty courses and provide teachers with professional development that previously may have been out of reach.

As stakeholders in the future of Texas, it is critical that we continue to be willing to replace the image we have in our minds of the traditional model of teaching and learning with an image that looks into the future and sees how best we can prepare our children for their coming lives as productive citizens.

**NUMBER OF STUDENTS ENROLLED IN  
TECHNOLOGY APPLICATIONS HIGH SCHOOL COURSES  
1997-2000**

<b>Course Name</b>	<b>1997-1998</b>	<b>1998-1999</b>	<b>1999-2000</b>
Computer Science	26,318	31,348	29,088
Desktop Publishing	271	3,125	4,907
Digital Graphics/Animation	20	1,405	2,401
Multimedia	142	4,649	5,687
Video Technology	54	789	1,037
Web Mastering	46	7,114	11,050
Independent Study	43	780	1,926
<b>Total Courses</b>	<b>26,894</b>	<b>49,210</b>	<b>56,096</b>

Source: PEIMS Data

**GROWTH OF THE  
TEXAS LIBRARY CONNECTION  
1995-2000**

1995	642 campuses
1996	1,399 campuses
1997	2,404 campuses
1998	3,082 campuses
1999	3,600 campuses
2000	4,167 campuses

Source: EGS Research & Consulting Evaluation of the  
Effective Use of the Texas Library Connection

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*We got all new computers, and it is fun. I'm glad. I wish I knew who did it. If I see them, I will hug them.*

---

Second grader. Throckmorton ISD

---

# Educator Preparation and Development

Educators today are preparing students for occupations that have yet to be defined. No matter what those occupations will be, it is certain that technology will continue to play a major role both in students' lives today and in their future. Technology has become an integral part of our society and the amount and variety of technologies in our schools are increasing rapidly to keep pace.

As electronic tools affect our everyday lives, technology's effective use in education is essential. Texas needs new teachers with new technology skills and current teachers capable of learning how to integrate technology effectively. A well-trained teacher work force must be actively engaged in the current practices of teaching and learning to affect student achievement. In order to survive in the 21st century, students and teachers must become skilled in the use of educational technology for problem solving, critical thinking and learning new content.

Preparing teachers and administrators to guide 21st century learning in our technological society involves a reexamination and retooling of the professional core of our education system. This effort cannot be limited to a single body; it is a goal that must be shared by many education stakeholders. It must be aimed not only at new educators—teachers, administrators, curriculum coordinators, counselors, and librarians, among others—but at experienced educators as well, who must be willing to learn.

At the preservice level, the work of the State Board for Educator Certification, whose updated Examinations for the Certification of Educators in Texas—or ExCETs currently under development—will set new standards for individuals entering the teacher workforce. These examinations, aligned with the TEKS, will weave technology directly into expectations of what new teachers should know and be able to do. The Board also has introduced technology standards for teacher preparation program curricula so that programs for Technology Applications certificates will be aligned both with state teacher certification standards and with the TEKS.

Centers for Professional Development of Teachers and Centers for Educator Development (including the Technology Applications Center for Educator Development) continue to work within the teacher

preparation system and with the implementation of the TEKS to ensure that new Texas educators are ready and able to instruct students using the newest pedagogy. Inservice educators benefit both from these efforts and from contributions of organizations such as the Southwest Educational Development Laboratory, the Texas Center for Educational Technology and the South Central Regional Technology in Education Consortium, whose programs strive to integrate technology into the instructional process.

In our libraries, we find better-prepared librarians and media specialists, thanks to new certification standards and to collaboration by the Texas State Library and Archives Commission and the Texas Education Agency for delivering relevant professional development to campus librarians. This collaboration model is one we see throughout the state, as librarians and teachers work together to integrate research skills into the curriculum.

The EGS Research & Consulting study of TLC—completed in June 2000—determined that the extent and quality of training was a significant factor in the initiative's success. *Evaluation of the Effective Use of the Texas Library Connection* reported that 85% of librarians received training in the use of TLC resources. More than 150 of the teachers surveyed reported that they integrate computers into instruction on a daily basis. Daily use of computers in instruction was reported by a larger percentage of teachers in the "other schools\*" group (32%) and by elementary (23.5%) and middle school (22.5%) teachers than by high school teachers (17%). Nearly 30% of the teachers integrate computers into their teaching once a week or more.

We find many possibilities for the "just in time" model of professional development, which gives educators information, training and technical support when and where they need it, both during

and outside their professional day. Teachers and other school staff members can choose from distance learning opportunities offered via satellite, video-conferencing or the Internet.

We see examples of concrete results. Northside ISD is working to solve, in part, a shortage of teachers qualified to teach the Technology Applications curriculum by making an online master's degree program available to its instructors. Fourteen ESCs participated in the Texas Women's University Speech Pathologist program offered by videoconference over TETN; 96% of participating graduate students passed the Speech Pathologist exam and received national accreditation. Using the methodology of learning by example, the Texas Education Agency broadcast a nine-part *Technology Applications: Promising Practices* series over the statewide T-STAR satellite system to share positive examples of how the Technology Applications TEKS are being implemented across the state. The series also provides information about educator resources for TEKS implementation.

Through implementation of the *Long-Range Plan for Technology*, we discover experiences of integration and collaboration. These concepts guide us as we work to meet the goals of the plan. They indicate to us that the responsibility to educate students in the use of technology does not fall to a single group or method but is the result of bringing ideas, people and groups together to best benefit our children.

\*other schools: a category composed mainly of schools that combined elementary, middle and/or high school grades on a single campus.

**PERCENT OF LIBRARIANS  
SURVEYED WHO RECEIVED TRAINING  
IN THE USE OF  
TEXAS LIBRARY CONNECTION (TLC)  
RESOURCES  
1999**

85% of librarians surveyed received training in the use of TLC Resources. Of those:

Percent	Source of Training
63	Education Service Center
31	Within Local District
6	Other

Source: EGS Research & Consulting 2000 Study of the Effective Use of the Texas Library Connection

**EDUCATOR PREPARATION CATEGORY  
OF THE TECHNOLOGY INTEGRATION  
IN EDUCATION GRANTS**

Populations Affected in 1998

Population	Number
Students	78,077
Teachers	6,298
Administrators	364
Campuses	255

Source: Technology Integration in Education Grant Program

*Our school children have benefited from an increased commitment to technology at both the state and local levels. We have recognized that children must have not only a solid foundation in core academic areas but also the ability to understand and utilize technology. Similarly, teachers and administrators must have training and professional development in the area of technology if they are to provide this foundation for our children.*

Jim Nelson, Texas Commissioner of Education



# Administration and Support Services

The technology field is changing rapidly. It is virtually impossible for any one person within a school system to maintain the necessary knowledge regarding all aspects of schooling and school operations when planning for and implementing technology. Because of this, school personnel must plan collaboratively and continuously if the use of technology is to lead to improved student learning, increased productivity, and more efficient operations. Effective integration requires district leaders who articulate and advocate a vision of what technology can do for teachers and learners and of school operations that facilitate the achievement of that vision.

It is not enough merely to install technology infrastructure—to connect schools to the Internet or to teach students to use software for gathering information. The successful integration of technology into Texas schools, as outlined in the *Long-Range Plan for Technology*, hinges on administrators knowing what their schools need and doing what must be done to fulfill those needs. Administrators facilitate the systems that allow our teachers and students to learn and use technology. As a result, successful integration of technology depends on the effective support of those administrators' efforts.

In line with the *Long-Range Plan*, several systems have been put into place for that purpose. Consider these examples of applications now available on the Texas Education Agency website:

- ◆ Information from the AEIS is searchable online, giving administrators fingertip access to data such as student performance, staff demographics, and school and district accountability ratings and finances.
- ◆ AskTED allows users to find school directory information and predefined reports.
- ◆ Online payment utilities such as the Child Nutrition Programs Information Management System and the State Foundation Payment System save school personnel precious time and resources.

Technical support is also a key component for the successful use of technology. In addition to providing resources to Texas schools, we must ensure that assistance is available for learning to use these tools and for troubleshooting problems in the early stages. TETN and T-STAR provide videoconferencing and

satellite infrastructure and resources for districts to use. Currently, T-STAR is transitioning from analog to digital delivery, an improvement in itself, but one that cannot be made without support and training. The new T-STAR Digital Task Force is working to ensure a smooth transition for all T-STAR coordinators across the state.

Planning for technology is also critical, as is finding the funding for it. The *Long-Range Plan for Technology* directs much of the growth in the use of educational technology throughout the state. Eligibility for funding sources such as E-Rate, the Technology Integration in Education (TIE) grant program, and the Telecommunications Infrastructure Fund (TIF) requires that districts have their own technology plans in place. In addition to those funding sources, districts are using the state's \$30-per-student Technology Allotment, a source they count on to pay for professional development and hardware and software needs.

Finally, fresh in our minds is the Year 2000 (Y2K) effort. The Texas Education Agency assisted ESCs by sharing information about Y2K issues in face-to-face meetings and over the Web. The Agency itself passed through the century transition with no critical Y2K failures.

The goal for technology in classrooms across Texas is to prepare our students for a future of technology fluency and to enhance students' acquisition of knowledge through technology. Technology's integration into our schools doesn't end there. District and campus administrators are also finding many uses for technology that help them in their important roles as managers and as education leaders.

**SUMMARY OF FOUR YEARS OF TECHNOLOGY INTEGRATION  
IN TECHNOLOGY (TIE) AWARDS  
1997-2000**

<b>Year</b>	<b>Amount (In millions)</b>	<b>Number of Awards</b>	<b>Number of Districts</b>	<b>Dollar Range</b>	<b>Number of Collaborative Members</b>
1997	\$15.5	19	191	\$43,352-\$4.5 Mil	2 -60
1998	\$33	38	452	\$76,107-\$3.1 Mil	2 -79
1999	\$33	31	419	\$79,000-\$2.85 Mil	2 -79
2000	\$33	25	258	\$92,085-\$2.9 Mil	2 -35

Source: TIE Grant Program

**IMPACT OF 1998 TIE FUNDS**

Total number of campuses:	1,650
Total number of administrators affected:	7,533
Total number of teachers affected:	46,936
Total number of students affected:	671,094

Source: TIE Grant Program

**NUMBER OF SCHOOL DISTRICT  
TECHNOLOGY PLANS FOR E-RATE  
CERTIFIED BY THE  
TEXAS EDUCATION AGENCY**

<b>Year</b>	<b>Number</b>
Year 1	812
Year 2	281
Year 3	389

**25% LIBRARY SUPPLEMENT, RIDER 70  
1999-2000**

<b>District Size By Student Population</b>	<b>Number of Districts Applying for Rider 70 Funding</b>	<b>Number of Students Benefiting From Rider 70 Funding</b>
50,000 and up	11	931,762
49,999-25,000	24	826,359
24,999-10,000	47	736,006
9,999-5,000	63	425,830
4,999-3,000	74	289,494
2,999-1,600	119	263,401
1,599-1,000	115	149,005
999-500	202	146,734
Under 500	258	69,237
<b>GRAND TOTAL</b>	<b>913</b>	<b>3,837,828</b>

*The efficiency of the (online) system saves time for me. I've started keeping my discipline log, managing my campus budgets and communicating with staff via email. What did I do before I had this?*

Intermediate School Principal

# Infrastructure for Technology

The term “infrastructure” suggests putting into place a means of delivery, a way to provide all the benefits of technology to districts and campuses, using the best possible methods and resources. When we discuss the infrastructure of technology in Texas education, we speak both of the physical infrastructure—the “boxes and wires” that make connections possible, and of the human infrastructure—the people who use the technical components and their capabilities or proficiencies. These two aspects of infrastructure work together to facilitate communication and to enhance skills and knowledge among public education stakeholders. Results are seen in connections of people and information that are made possible by networks of “boxes and wires.” In a state as large, populous and geographically diverse as Texas, creating the needed infrastructure—that means of delivery—offers a unique challenge.

The Public Access Initiative—the Texas Education Agency’s strategic plan for implementing the *Long-Range Plan for Technology*—has added and refined several projects during the time span covered by this report. For example, a Public Education Data Warehouse allows comprehensive access to education-related data. In addition, the Agency website has been enhanced with information and utilities such as the Texas Education Directory and TEA Answers On-Line, both of which give public education stakeholders the information they need, when they need it, via the Web.

ESCs have many resources at their disposal to build on their technology infrastructures. The 20 ESCs serve as the points of service—with the Agency at the hub—for TETN. Implemented in 1995, this video, audio, and data telecommunications network has flowered over the past two years. To keep TETN effective and current, an upgrade to ATM technology is currently underway. With the conversion of TETN to ATM, the amount of traffic that can be carried over the network will be able to fluctuate on demand while continuing to reduce overall network operating costs. ESCs are also working to enhance their regional networks to allow an even greater exchange of resources and knowledge on the local level. These combined resources save districts significant amounts of money and permit more attendance at meetings and participation in professional development opportunities than district travel budgets would normally allow.

Another infrastructure component that has grown over the past two years is T-STAR, a statewide satellite system that allows schools and districts to gain access to distance learning and professional development programming from within the state and across the country. Like TETN, T-STAR is being upgraded to keep it current and effective. The shift to digital delivery will allow district and campus computer networks to distribute satellite programming at the desktop level.

The *Long-Range Plan for Technology* recommends a student to computer ratio of 3:1. Although we are not there yet, statistics show we’ve made significant progress toward that goal in just the last two years.

A review of recent TIE awards shows us that distance learning and videoconferencing continue to be important to districts and ESCs that apply for the awards. For example, Allen ISD and Laredo ISD created a virtual district between them, allowing students in both districts not only to collaborate with each other but also to get to know each other despite physical and social barriers. In another region of the state, 34 high school campuses have been connected to their ESC, allowing students to take concurrent enrollment courses and helping districts meet the challenge of finding fully certified teachers.

As the infrastructure reaches all students across our state, it brings exciting learning opportunities never before imagined.

**TECHNOLOGY INFRASTRUCTURE AND CONNECTIVITY  
THROUGH THE EDUCATION SERVICE CENTER  
REGIONAL NETWORKS\*  
2000**

Number of districts connected to their ESC regional network:	862
Number of additional instructional campuses and administrative offices connected to their ESC regional network:	464
Number of charter schools connected to their ESC regional network:	13
Number of higher education institutions connected to an ESC regional network:	53
Number of other entities connected to an ESC regional network:	16
Number of secondary connections to instructional campuses and administrative offices supported by their ESC:	1,106
Number of districts and charter schools accessing the Internet via their ESC regional network:	819

\*ESC Regional Networks provide voice, video and/or data capabilities.

**Student to Computer Ratio in Texas  
1997-1999**

1997	20:1
1998	12:1
1999	8.9:1

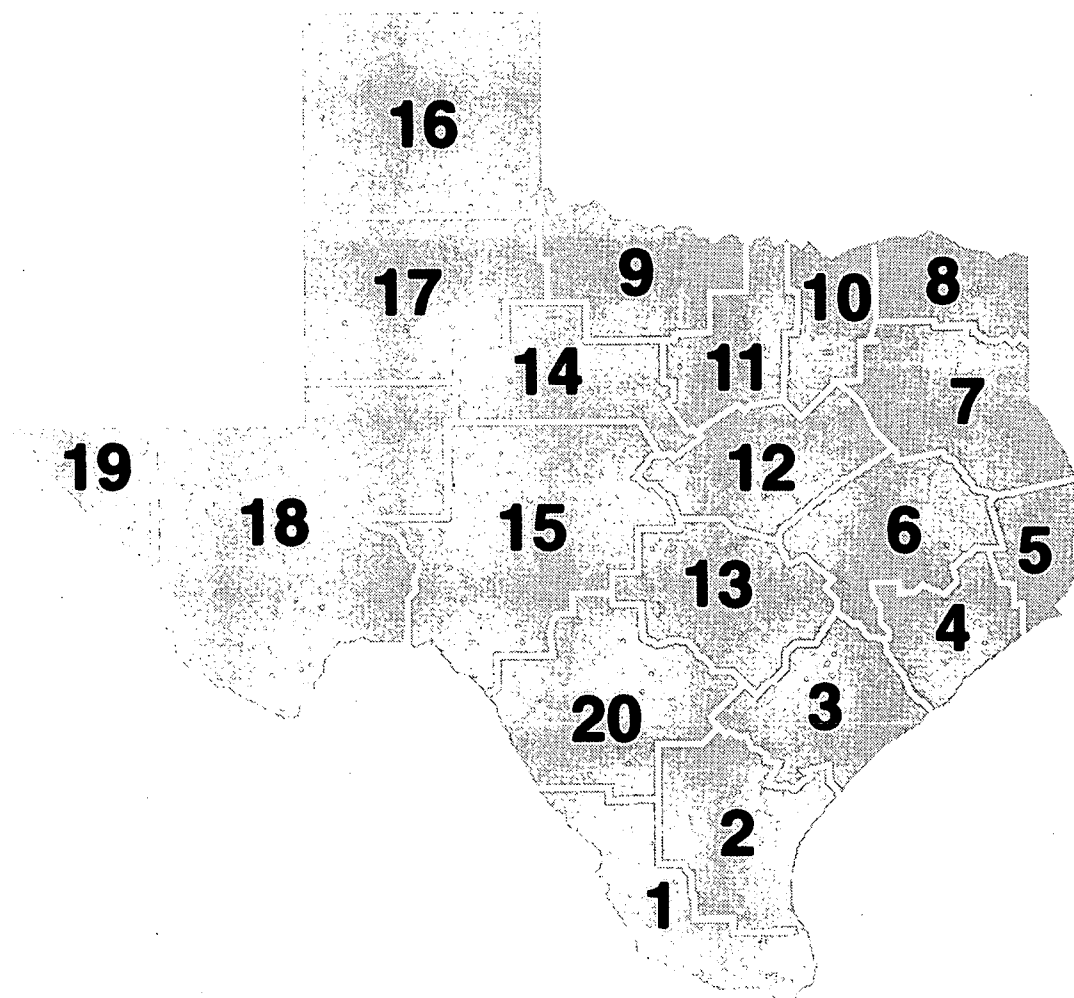
Source: *Education Week's* special report, *Technology Counts*

*No nation can operate a 21st century economy without a 21st century electronic infrastructure embracing computers, data communications and other new media. This requires a population as familiar with this informational infrastructure as it is with cars, roads, highways, trains and the transportation infrastructure of the smokestack period. Access to the media system, including computers, faxes and advanced telecommunications must be as free and easy as access is today to the transportation system.*

Ian Jukes, Associate Director, Thornburg Center for Professional Development



# Education Service Center Regions of Texas



# Education Service Centers

Each of Texas' 20 education service centers (ESCs) is responsible for providing its districts with technology services in ways that enhance efficiency, effectiveness and the performance of students, teachers and administrators. Specifically, ESCs must provide planning, consultation, professional development and technical assistance in response to district needs and in support of the State Board of Education's *Long-Range Plan for Technology*. The desired outcomes include development of collaboratives and partnerships, regional network development and operation, education resources preview centers, training and professional development services, support of the Texas Library Connection and other statewide technology initiatives, planning and grant development, and distance learning opportunities. The Texas Education Agency's Educational Technology Division assists with financial support.

Although each ESC has an identical charge, as outlined above, no two ESCs respond to that charge in the same way. Instead, approaches vary according to the enormous differences in geographic and demographic conditions across the state. The result is a set of 20 customized regional technology programs—begun by building onto local initiatives and developed with consideration for local needs, interests and capabilities. Education Service Center Web pages highlight the range of creative and effective ways ESCs interact with their districts to accomplish their mutual goals.

ESCs are assisting districts as they move from the chalk-and-erasers model of teaching and learning to a 21st century vision of what learners can accomplish using educational technology. They offer tools and training that allow students to increasingly take charge of their own learning and enable educators to help them do so in meaningful ways. For example, ESCs assist schools in supporting and maintaining their computer equipment. In workshops offered through several ESCs, high school students learned troubleshooting techniques for PCs, as well as how to build computers and small local area networks (LANs). This program has now been expanded to include training that leads to industry standard certification.

Technology professional development is a cornerstone of the services provided by education service centers. A variety of technology workshops are offered by each ESC throughout the year to meet the varied needs of school districts. Educators can learn the basics of technology use, receive training on specific software packages, find educational

resources on the Internet and explore strategies for integrating technology across the curriculum. ESCs also provide TIFTech training, customize training for individual school districts and offer training via multiple technologies. Educators can view the professional development offerings through ESC Web-based catalogs and register for selected workshops online.

Over the past biennium, Texas' 20 ESCs have provided secure and affordable local regional networks for educators to use for everything from lesson preparation to email and Internet access to job searches—and have taught them how best to utilize these networks. ESCs invest in training for their own staff members and for key district personnel to create a growing base of educators who can support technology at the campus level when needed. ESCs also maintain increasingly well-stocked technology centers for preview and checkout of software and other media, as well as assistive equipment for students with disabilities. In addition, they develop, update and expand tools for data disaggregation and interpretation to help educators monitor and adjust instruction to meet student performance accountability standards.

Distance learning capabilities provided by ESCs are enormously helpful—especially to small, poor or isolated districts—providing educators with access to high-quality, on-demand professional development and continuing education opportunities. Distance Learning also allows them to participate in meetings, study groups and forums without leaving their campuses. School board members benefit from training delivered electronically, as do parents and

community members who may meet with educators via technology. Students now have access to specialized offerings previously unavailable in their schools, such as dual and concurrent credit, Advanced Placement and International Baccalaureate high school courses, enrichment and career programs, electronic field trips and bilingual instruction. For example, districts lacking instructors in hard-to-find science, math, foreign language, or technology courses may pool their resources and hire teachers jointly for videoconference classes received at multiple sites.

ESCs provide ongoing training and support for statewide technology initiatives, including T-STAR and TLC and serve as resources for districts seeking funding via TIF or TIE grants and E-Rate. To provide support for local technology initiatives, ESCs frequently establish and maintain partnerships with software and hardware vendors, colleges and universities, and other ESCs. The 20 ESCs play a key role in assisting districts and the state in reaching the goals of the *Long-Range Plan for Technology, 1996-2010*.

**Number of Educators Receiving  
Technology Training Through the  
Education Service Centers  
1997- 2000**

Year	Number
1997	85,734
1998	97,494
1999	92,734
2000	100,234

**Distance Learning Via Videoconferencing  
Provided by the Education Service Centers  
September 1999- August 2000**

Number of campuses whose students have access to their ESC's videoconferencing network to receive distance learning:

996

**Other Training Services  
Provided by the  
Education Service Center  
September 1999- August 2000**

Number of personnel who received ESC-facilitated training regarding TLC:  
3,349

Number of districts with personnel who received ESC-facilitated training in the planning process for integrating technology into campus and district improvement plans and other planning documents:  
713

Source: ESC Performance Reports to TEA

*This was our first year to implement Internet district-wide. Many of the faculty members don't know how they got by without it. Also when it goes down I sure hear about it quick, so I know it is being used!*

Educator referring to technology services provided through their ESC's regional network

# Timeline of Events and Accomplishments

## September 1983 - August 1984

- ◆ HB 1304 calls for a long-range plan for technology
- ◆ HB 246 mandates a computer literacy course at Grades 7 or 8

## September 1984 - August 1985

- ◆ Software Advisory Committee (SBOE) established
- ◆ The State Board of Education established essential elements for Computer Literacy and Computer Science (TAC, Chapter 75). Computer Literacy was a required course. Computer Science was included in the Advanced high school program. The requirement to teach these courses included Computer Literacy Endorsement: Information Processing Technologies (IPT) and Computer Science Certification: Computer Information Systems (CIS).

## September 1988 - August 1989

- ◆ The *Long-Range Plan for Technology, 1988-2000* adopted by the SBOE

## September 1988 - August 1990

- ◆ SB 650 authorizes statewide initiatives defined by the *Long-Range Plan for Technology, 1988-2000*
- ◆ SB1 establishes the Technology Allotment
- ◆ Technology Preview and Training Centers established at education service centers (ESCs)
- ◆ Textbook adoption process amended to include electronic media
- ◆ First Technology Demonstration Sites established
- ◆ Advisory Committee on Technology Standards (ACTS) established by the SBOE
- ◆ Texas Center for Educational Technology (TCET) established at the University of North Texas
- ◆ Integrated Telecommunications Feasibility Study completed

## September 1990 - August 1991

- ◆ First electronic textbook adopted by the SBOE
- ◆ Textbook Proclamation 68 calls for only electronic textbooks to be submitted for computer literacy
- ◆ Texas Schools Telecommunications Access Resource (T-STAR) established
- ◆ Texas Education Network (TENET) established
- ◆ TENET Master Trainers Program established
- ◆ SAC recommended use of *The Educational Software Selector (TESS)*

## September 1991 - August 1992

- ◆ SB 351 includes technology funds in Foundation School Program
- ◆ Districts required to submit five-year technology plans to TEA and DIR
- ◆ Technology Allotment Funds flow to districts
- ◆ Technology funds support ESC Technology Preview Centers and Training Programs



## Timeline of Events and Accomplishments (*continued*)

### September 1992 - August 1993

- ◆ SB 7 includes technology planning in campus and district improvement plans
- ◆ SAC and ACTS combined to form Educational Technology Advisory Committee (ETAC)
- ◆ SB 5, Rider 61, calls for development of a statewide database of public school library holdings
- ◆ HB 183 and HB 1029 call for establishment of technology demonstration sites—Projects for Educational Technology (PETs)
- ◆ First eight Centers for Professional Development and Technology (CPDTs) established
- ◆ First TEA programs broadcast from the William B. Travis Building over the T-STAR Network
- ◆ First annual TCET Symposium

### September 1993 - August 1994

- ◆ 22 planning grants awarded to 77 districts and their collaborators under PETs
- ◆ T-STAR Information and Training Center established
- ◆ TENET website created
- ◆ The Technology Applications component, formerly known as computing proficiency, was included in the Advanced and Recommended high school graduation plans
- ◆ Six new CPDTs established

### September 1994 - August 1995

- ◆ Creating Connections Consortium designated demonstration site under PETs
- ◆ Texas Library Connection (TLC) established
- ◆ Tri-State Multimedia (*Vital Links*) Project released
- ◆ Texas Education Telecommunications Network (TETN) implemented
- ◆ HB 2128 established the Telecommunications Infrastructure Fund (TIF) and provided discounted telecommunications rates to Texas public schools
- ◆ ETAC members charged with writing the Texas Essential Knowledge and Skills (TEKS) for the technology applications curriculum area

### September 1995 - August 1996

- ◆ 16 Planning grants and 5 Implementations grants awarded to 92 districts and their collaborators under PETs
- ◆ Final T-STAR grants for satellite dishes awarded to schools (bringing the total number to 1,054)
- ◆ T-STAR Studio B established, providing two-way videoconferencing facilities
- ◆ TCET Project Electronic Emissary website receives national recognition by McKinley Group
- ◆ Seven CPDTs established (bringing the total number to 21)
- ◆ Technology Allotment moved to the Textbook Fund
- ◆ Texas Task Force on Educational Technologies established to update the *Long-Range Plan for Technology, 1988-2000*

## Timeline of Events and Accomplishments (*continued*)

### September 1996 - August 1998

- ◆ The *Long Range Plan for Technology, 1996-2010* adopted by SBOE
- ◆ Public Access Initiative established to implement the *Long-Range Plan for Technology, 1996-2010*
- ◆ Texas Education Agency website established to provide educators, legislators and community members with immediate access to education data and services
- ◆ TEA receives IBM *Reinvent Education* grant to develop statewide data warehouse
- ◆ T-STAR Studio B videoconferencing facility integrated into T-STAR Network broadcast capability
- ◆ Technology Integration in Education (TIE) grant program awards \$15.5 million to 19 local education agencies, impacting 195 districts
- ◆ Computer Network Study, authorized by SB 294, conducted to determine costs and benefits of using computer networks, including the Internet, in public schools
- ◆ T-STAR website established
- ◆ T-STAR Network receives award from National Educational Television Association for TEA's *Promising Practices* series
- ◆ Evaluation of the Full-Text Pilot Project: Texas Library Connection prepared by EGS Research & Consulting submitted to TEA
- ◆ TEKS for Technology Applications adopted by SBOE for implementation beginning September 1998
- ◆ The State Board of Education adopted amendments to 19 TAC, Chapter 74, Curriculum Requirements, to include all the newly adopted Technology Applications courses developed with the TEKS for graduation credit for all plans beginning the 1997-1998 school year
- ◆ PETS grant program awards six grants for technology staff development models
- ◆ Sharing Technology Applications Resources with Teachers (START) kit to assist educators in the implementation of the Technology Applications curriculum funded by TEA and developed by TCET for Texas educators
- ◆ First live broadcast from the Commissioner's Midwinter Conference on Education distributed by TEA over the T-STAR Network
- ◆ *Creating Connections* (1995 PETS project) receives the first annual Logotech Award from the Comptroller of Texas for community cost saving and the National Council of Chief State School Officers award for innovative use of technology in education
- ◆ TIE grant program awards \$33.3 million to 38 local education agencies, impacting 195 districts
- ◆ For Year 1 of E-Rate (January 1998 - June 1999), TEA directed the review of 812 technology plans
- ◆ Financial support of TENET phased out
- ◆ T-STAR Information and Training Center contracts with TCET to conduct research study of Texas districts to identify attributes of successful satellite-delivered, for-credit distance learning programs
- ◆ TLC website established
- ◆ Special issue of *T-STAR Magazine* offering information about distance learning courses and providers and highlighting results of research study conducted by TCET on for-credit distance learning distributed to Texas schools
- ◆ T-STAR *Survival Kit* with print and video resources disseminated to T-STAR sites and statewide User Group
- ◆ TLC total enrollment exceeds 3,000 campuses
- ◆ Video upgrade to TETN completed, paving the way to take advantage of ATM technology

## Timeline of Events and Accomplishments (*continued*)

### September 1998 - August 2000

- ◆ Technology Applications Center for Educator Development (CED) established at TCET
- ◆ The State Board for Educator Certification (SBEC) approved deletion of CIS and IPT ExCET assessments. The content of these tests was out of date and no longer aligned with the new Technology Applications TEKS. Alternative options are available until new ExCETs are in place
- ◆ Study conducted by TCET through the T-STAR Information and Training Center confirms the value of satellite distance learning for-credit courses
- ◆ Technology Summit held at the capitol to showcase the use of technology in Texas schools and the latest from technology and software providers
- ◆ Report to the Texas Legislature with recommendations from the Computer Network Study Advisory Committee
- ◆ T-STAR Digital Task Force established
- ◆ Data Central made available on TEA website
- ◆ First video wall incorporated into the Commissioner's Midwinter Conference on Education
- ◆ House Bill 1, Article III, Rider 70 funded by the 76th Legislature provided \$1.85 million for the 2000 - 01 biennium for resources for school libraries.
- ◆ The TETN Content and Services Group explored new applications and capabilities that will soon be supported by TETN—including H.323 video and dynamic bandwidth allocation for video, audio, and data.
- ◆ Request for Statement of Interest issued to encourage vendor participation in the EdTech PILOTS
- ◆ 1999 TIE grant program awards \$33.3 million to 32 local education agencies, impacting 419+ entities
- ◆ For Year 2 of E-Rate (July 1999 - June 2000), TEA directed the review of 281 technology plans
- ◆ Request for Application issued for the EdTech PILOTS
- ◆ The TETN Infrastructure Development Group completed the network design for the ATM upgrade to the TETN network.
- ◆ ETAC charged to develop a self-assessment tool for districts to gauge progress in implementing the Long-Range Plan for Technology
- ◆ EdTech PILOTS website created
- ◆ The Educational Technology Coordinating Council (ETCC) convenes
- ◆ Teacher's Tool Bag added to the Data Central website
- ◆ Texas Education Agency partners with University of Texas at Austin, University of North Texas, SBEC and the Higher Education Coordinating Board for a federal grant, *Preparing Tomorrow's Teachers to Use Technology*
- ◆ Enhancements made to the T-STAR Help Desk to provide more programming operators and more telephone technical assistance for all types of satellite receivers
- ◆ The TLC Information Center established at Education Service Center Region 20 for the purpose of ensuring that all citizens of Texas school communities are provided the information and skills to effectively use information resources available through TLC
- ◆ T-STAR programs received two awards from the Texas School Public Relations Programs (TSPRA)
- ◆ Rollover to the year 2000 (Y2K) completed successfully with no interruption of TEA services due to Y2K issues
- ◆ Web-based application process for districts to receive matching funds through the 25% Library Supplement established and activated

## Timeline of Events and Accomplishments (*continued*)

### September 1998 - August 2000 (*continued*)

- ◆ Thirteen sites selected as EdTech PILOTs to study the delivery of curriculum content to students via technology
- ◆ Open enrollment brought the total number of participants in TLC to 804 districts and 4,167 campuses
- ◆ Digital conversion of the T-STAR Studio facility completed
- ◆ A focus group of school, public and special librarians evaluated and selected online resources to be accessed through TLC for the 2000-2001 school year
- ◆ Cyberways and Waterways program, developed through TIE funding, received the Gulf Guardian Award in the area of youth and education
- ◆ CEDs for Reading and Language Arts, Mathematics, Science, Social Studies, Bilingual Education, Fine Arts, Languages Other Than English, and Technology Applications provide websites containing numerous resources for teachers to use to implement the TEKS
- ◆ Students, teachers, librarians, and administrators surveyed and interviewed to determine the usage and effects of TLC
- ◆ TEKS for Technology Applications included in the 2000 Computerworld Smithsonian Collection
- ◆ *Technology Applications: Promising Practices* nine-part series broadcast over T-STAR
- ◆ SBEC approved Technology Applications standards for all beginning teachers. The development and review meetings for these standards were held in July and November of 1999
- ◆ Digital uplink for the T-STAR Network installed on the William B. Travis Building in Austin
- ◆ 2000 TIE grant program awards \$33.0 million to 25 local education agencies, impacting 258+ entities
- ◆ For Year 3 of E-Rate (July 2000 - June 2001), TEA directed the review of 389 technology plans
- ◆ T-STAR publications offering updates on digital satellite technology and programming providers developed, published and distributed
- ◆ Technology Applications standards and certificate fields for Grades 8-12 beginning educators recommended to SBEC. The development and review meetings for these standards were held in January and June of 2000
- ◆ Installation of ATM equipment for TETN begins



# *Current Status of the Long-Range Plan for Technology, 1996-2010*

*Implemented through the  
Public Access Initiative*

*Authorized Under Texas Education Code  
Chapter 32*

*To prepare students for the 21<sup>st</sup> century, it is the policy of this state that a superior education should be available to all students under a thorough and efficient system of public education. Educational resources shall be devoted to the maximum extent possible to the instruction of students. To accomplish those purposes, public education must use, in a comprehensive manner, appropriate, accessible technology in all aspects of instruction, administration, and communication.*

Prepared by the Division of Educational Technology

Texas Education Agency  
1701 North Congress Avenue  
Austin, Texas 78701-1494

September 2000

## Current Status of the Long-Range Plan for Technology

Authorized Under Texas Education Code, Chapter 32

# EDUCATIONAL TECHNOLOGY

*States across the nation continue to look to Texas as a leader in educational technology. A visionary plan and an impressive array of technology initiatives earned Texas this leadership position. Technology is a powerful tool that can transform the educational experience. Texas schools have a wealth of technology resources from which to choose to meet their local education goals and to provide all students with access to quality educational opportunities.*

### ***Initiative***

Development of Long-Range Plan  
TEC 14.021 & TEC 32.001

### ***Description***

In 1985, in accordance with state legislation, the State Board of Education (SBOE) developed and adopted a long-range plan for the use of technology in education. Texas was one of the first states in the nation to adopt such a visionary plan. The original long-range plan for technology (LRPT) covered the years 1988-2000. In response to changes in legislation and business and industry, as well as developments in technology, a new plan was adopted by the SBOE in 1988. The *Long-Range Plan for Technology, 1996-2010* charts the course for providing all Texas students with access to quality educational opportunities through the use of technology. As we move into the 21st century, evolving technology plays a critical role in all aspects of society. The LRPT serves as the state's blueprint for putting cost-effective tools to gain the knowledge and skills required for teaching, learning and working in the 21st century into the hands of Texas students, teachers, librarians and administrators. This plan clearly establishes technology as an essential priority in ensuring that **all** Texas schools, regardless of their size, geographic location or district wealth have the ability to provide quality educational opportunities.

### ***Purpose***

The fundamental goal of the *Long-Range Plan for Technology, 1996-2010* is to enhance students' acquisition of knowledge through technology. Inherent in this priority goal is the conviction that technology, equitably distributed, plays a critical role in addressing economic and other disparities among all students and in meeting the needs of students with disabilities.

The technologies addressed in the plan and utilized in Texas schools include computer-based systems, devices for storage and retrieval of massive amounts of information, telecommunications facilities for audio, video and information sharing and other electronic media that can help meet the instructional and productivity needs of public education.

*The goals of the LRPT are reflected in the four main areas of the plan: Teaching and Learning, Educator Preparation and Development, Administration and Support Services, and Infrastructure for Technology.*

The Texas Education Agency (TEA) provides leadership and support in the use of technology through a wide variety of technology initiatives that give Texas students, parents, teachers, administrators, legislators and business leaders access to the tools, products and information they need to make decisions, to educate, to plan and to learn. These technology initiatives collectively comprise the Public Access Initiative, which is the Agency's strategy for implementing the LRPT.

Current Status of the Long-Range Plan for Technology  
Authorized Under Texas Education Code, Chapter 32

# TECHNOLOGY ALLOTMENT

## ***Initiative***

TECHNOLOGY ALLOTMENT  
TEC 14.063/TEC 31.021

## ***Description***

Technology Allotment funds, established during the Sixth Called Session of the 71st Texas State Legislature, provide \$30 per student for technology. These funds were originally intended to increase incrementally each year, up to \$50 per student. Subsequently, the funds were held at \$30 per student. In 1995, revisions to the Texas Education Code moved the Technology Allotment to TEC 31.021 to be paid from the Textbook Fund. Through the Technology Allotment, school districts across the state have a baseline resource with which to develop and expand their existing technology programs and to provide technology training.

Technology Allotment funds may be used only to:

- (A) Provide for the purchase by school districts of electronic textbooks or technological equipment that contributes to student learning; and
- (B) Pay for training educational personnel directly involved in student learning in the appropriate use of electronic textbooks and for providing for access to technological equipment for instructional use.

*The national and state level recommendation is for schools to spend at least 30% of their technology funds for professional development.*

**Electronic Textbooks are defined as:** computer software, interactive videodisc, magnetic media, CD-ROM, courseware, on-line services, an electronic medium or other means of conveying information to the student through electronic means. Technological equipment is defined as hardware, device or equipment necessary for instructional use to gain access to or enhance the use of an electronic textbook.

## ***Purpose***

The Technology Allotment provides equal access to funds for teaching and learning tools of high quality and information resources through the application of computers and emerging technology and to improve student productivity throughout the state.

## ***Funding Level***

FY '93 .....	(Avg. \$27 per student) .....	\$ 88,055,851*
FY '94 .....	(Avg. \$26 per student) .....	\$ 96,165,414*
FY '95 .....	(Avg. \$24 per student) .....	\$101,382,738*
FY '96 .....	(Avg. \$30 per student) .....	\$103,117,894*
FY '97 .....	(Avg. \$30 per student) .....	\$105,556,450*
FY '98 .....	(Avg. \$30 per student) .....	\$107,677,933*
FY '99 .....	(Avg. \$30 per student) .....	\$109,381,695*
FY '00 .....	(Avg. \$30 per student) .....	\$112,031,071*

\*total \$ sent to districts

**Current Status of the Long-Range Plan for Technology**  
**Authorized Under Texas Education Code, Chapter 32**

# **PUBLIC ACCESS INITIATIVE**

## **Data Central and the Teacher's Tool Bag**

### ***Description***

The Agency continues to build the capacity to improve public access to enterprise information for decision making by public education stakeholders through numerous projects that collectively comprise a new major project called the Public Access Initiative (PAI). The program consists of building a technology infrastructure of a data warehouse and data marts, collectively known as Data Central, and an Internet Portal known as the Teacher's Tool Bag.

*Anyone with a web browser and an Internet connection can visit both Data Central and the Teacher's Tool Bag.*

When visitors browse Data Central, they will find a rich, easy to use resource of data and information drawn from major agency databases such as PEIMS and TAAS. Unlike PEIMS Core Reports and most agency presentations of data, Data Central provides reports that:

- ◆ Show data over time—three years of student data and five years of financial data
- ◆ Present comparative data—simultaneous displays of data for more than one school district
- ◆ Provide information in both graphical displays and standard report formats
- ◆ Allow point and click transfer of data to the requestor's PC for their use in further analysis
- ◆ Display campus, district, regional and state information
- ◆ Let visitors find a district through a map as well as a district name

Data Central is the source for the new Longitudinal Student Performance Record (LSPR), which provides requesting districts detailed demographic, membership and testing data from both PEIMS and TAAS—including item scores—for every student in their district. The LSPR data, when coupled with district-held information about teacher assignments and class schedules, enables sophisticated analysis of student performance at the classroom level. More than 650 districts requested the file the first year it was offered.

The Teacher's Tool Bag is a rich resource for educators, providing instantaneous links to online resources such as TEKS lesson plans, awards and special programs, reference sites, and professional development. Curriculum resources are easy to find, as they are organized by content area and by grade. Educational resources include the Book Bag, classroom management strategies and lesson plan collections. The Teacher's Tool Bag also includes quick links to Top Pick sites such as the Centers for Educational Development, as well as to such Agency sites as AskTED, Educational Technology, TEKS and AEIS. The Teacher's Tool Bag also includes links to individual district and ESC websites.

More than 1000 visits a day are made to Data Central and the Teacher's Tool Bag—and the number is growing every day as word of its availability and utility spread.

### ***Funding Level***

FY '98 .....	\$ 1,850,000*
FY '99 .....	\$ 2,000,000**
TIF grant .....	\$10,135,000

\*The FY '98 funding level includes \$850,000 in IBM *Reinventing Education 2* grant funds and \$1,000,000 of Agency discretionary funds.

\*\* The FY '99 funding is from Agency discretionary funds.

# Current Status of the Long-Range Plan for Technology

## Authorized Under Texas Education Code, Chapter 32

# T-STAR

### Integrated Telecommunications System

TEC 32.033

TEXAS SCHOOL TELECOMMUNICATIONS ACCESS RESOURCE (T-STAR)

### **Description**

The Integrated Telecommunications System includes T-STAR. Established in 1990, The Texas Schools Telecommunications Access Resource (T-STAR) is a statewide telecommunications initiative that provides television communications (one-way video/two-way audio via satellite) to school districts, regional ESCs and the Agency. T-STAR delivers a wide choice of distance learning opportunities from TEA and programming providers across the U.S. The Agency's integrated telecommunications plan provides for the migration of Internet access, T-STAR and TETN into a single Integrated Telecommunications System for Texas educators.

Texas students and educators can use T-STAR to expand their curriculum and educational resources through satellite-delivered for-credit courses, K-12 curriculum enhancement programming and electronic field trips, and professional development teleconferences from programming providers across the country. They can also access five hours of programming per week that is broadcast from TEA.

*A digital uplink has been installed at the William B. Travis Building in Austin and digital capabilities have been added to the downlinks at all 20 ESCs and the T-STAR Network studio facilities.*

More and more satellite-based distance learning providers now deliver their services via digital broadcast. As the satellite industry undergoes a major shift from analog to digital service, T-STAR is also transitioning to digital to enable Texas schools to take advantage of these educational resources. Texas school districts are encouraged to convert their analog-only T-STAR dishes to receive both digital and analog transmissions. During the transition period, programming from TEA will be broadcast in both analog and digital formats in order to give districts time to convert their T-STAR satellite dishes to digital.

### **Purpose**

T-STAR allows more than 1,000 school districts and all 20 regional education service centers (ESCs) to access distance learning courses, professional development training and a variety of instructional television programming available via satellite.

T-STAR equipment is designed to allow schools to receive satellite-delivered educational programming from a great variety of program providers across the country, including the Texas Education Agency. Current focus is to provide training and information to the schools on how to use the equipment, how to select appropriate programming for their local school and how to effectively utilize the programs in the classrooms.

### **Funding Level**

FY '93 .....	\$1,500,000
FY '94 .....	\$2,500,000
FY '95 .....	\$7,670,000
FY '96 .....	\$2,250,000
FY '97 .....	\$1,750,000
FY '98 .....	\$1,750,000
FY '99 .....	\$3,000,000
FY '00 .....	\$2,000,000



# Current Status of the Long-Range Plan for Technology

Authorized Under Texas Education Code, Chapter 32

## TETN

Integrated Telecommunications System (CONTINUED)

TEC 32.033

TEXAS EDUCATION TELECOMMUNICATIONS NETWORK (TETN)

### Description

The Integrated Telecommunications System also includes TETN. The Texas Education Telecommunications Network (TETN) is a statewide educational network, established in 1995, providing compressed, two-way video/audio videoconferencing, audio communications, and data transfer capabilities between TEA and all 20 regional ESCs via dedicated T1 lines, with the capabilities to connect to schools and other public institutions.

TETN is used for electronic meetings and panel discussions, professional development and training, for-credit courses, PEIMS data transfer and computer files transfer. The TETN network is in the process of migrating from a T1 environment to an Asynchronous Transfer Mode (ATM) environment to increase the capabilities of the network and reduce telecommunications service charges. Additional enhancements to the TETN will include:

- ◆ Connection to the intra-regional networks of all 20 ESCs
- ◆ Additional capability to dynamically re-allocate bandwidth based on demand
- ◆ Data encryption to enhance security

*TETN is being enhanced to provide an ATM telecommunications environment that supports the interactive transfer of audio, video and data between TEA, the ESCs, districts and individual campuses.*

### Purpose

TETN provides a dedicated telecommunications infrastructure between regional ESCs and the Texas Education Agency addressing the expanding need to exchange information and improve communication.

The purpose of TETN is to facilitate communications among these key educational entities throughout the state and to make it possible for more information, training and data to be shared while simultaneously reducing costs and time lost due to travel.

TETN improves communications and reduces travel expenses and staff travel time for schools, regional education service centers and TEA. TETN is also used for electronic transfer of school data between regional education service centers and TEA.

The enhancements to TETN will facilitate interconnection with regional and district networks and maximize the public education system's use of the telecommunications environment.

### Funding Level

FY '95 .....	\$2,000,000
FY '96 .....	\$ 200,000
FY '97 .....	\$ 50,000
FY '98 .....	\$ 950,000
FY '99 .....	\$1,600,000
FY '00 .....	\$1,100,000

# Current Status of the Long-Range Plan for Technology

## Authorized Under Texas Education Code, Chapter 32

# TLC

Technology Demonstration Programs  
TEC 32.035  
TEXAS LIBRARY CONNECTION

### *Description*

Senate Bill 1, passed by the 74th Texas Legislature and codified as Texas Education Code, Section 32.035(a), calls for the Agency to establish demonstration programs. Demonstration programs shall: (1) investigate the uses, effectiveness, and feasibility of technologies for education, and (2) provide models for effective education using technology. A focus of these projects, as authorized in TEC Section 32.035(b), is "to encourage participation by and collaboration among districts, regional education service centers, the private sector, state and federal agencies, non-profit organizations, and institutions of higher education."

The Texas Library Connection (TLC), created in 1994, provides current, relevant information by identifying the physical location of books and resources of school libraries and by making available the full text of commercial online databases.

Through enrollment in TLC, Texas students and educators have access from their school library, classrooms and homes to a wealth of all the latest information. TLC provides:

- ◆ Access through interlibrary loan to more than 44 million books, videos, and computer software programs held in the libraries of schools across Texas that are participating in TLC
- ◆ Access over the Internet to the full text of more than 700 magazines, journals, and newspapers
- ◆ Access over the Internet to more than 8,000 government documents; and the ability to view what is in academic and public libraries in the neighborhood

### *Purpose*

The mission of TLC is to ensure that all citizens of its school communities are provided current, relevant information resources regardless of a district's size or geographic location. This mission is accomplished by:

- ◆ Providing an integrated, statewide resource sharing system through which needed information resources are identified, accessed, and retrieved
- ◆ Facilitating library administrative services and local collection development
- ◆ Providing appropriate electronic full text journals and newspapers and other informational databases
- ◆ Enhancing the ability of participating libraries to contribute to and participate in local, state and national resource-sharing initiatives, including the academic library statewide initiative, TexShare, and the public library statewide initiative, Texas State Electronic Library

### *Funding Level*

FY '94 .....	\$1,300,000
FY '95 .....	Carry-over
FY '96 .....	\$1,080,000
FY '97 .....	\$ 650,000
FY '98 .....	\$1,800,000*
FY '99 .....	\$1,500,000
FY '00 .....	\$2,500,000

\*Includes \$500,000 from School Improvement Initiative Funds

Current Status of the Long-Range Plan for Technology  
Authorized Under Texas Education Code, Chapter 32

# TECHNOLOGY DEMONSTRATION PROGRAMS

Technology Demonstration Programs (Continued)  
TEC 32.035

## ***Description***

Senate Bill 1, passed by the 74th Texas Legislature and codified as Texas Education Code, Section 32.035(a), calls for the agency to establish demonstration programs. Demonstration programs shall: (1) investigate the uses, effectiveness, and feasibility of technologies for education, and (2) provide models for effective education using technology. A focus of these projects, as authorized in TEC Section 32.035(b), is "to encourage participation by and collaboration among districts, regional education service centers, the private sector, state and federal agencies, non-profit organizations, and institutions of higher education."

HB 183 & HB 1029 authorized TEA to establish one or more pilot, model, or demonstration projects to test the effectiveness of educational technologies not currently in general use in Texas schools.

## ***Purpose***

The purpose of Projects for Educational Technology (PETs) is to provide equal access for students, teachers and administrators throughout the state to high quality teaching and management tools. Planning grants provide districts/campuses with resources to conduct proper and efficient planning. These grants should promise to promote systemic change in the educational environment. Implementation grants promote systemic change in the educational environment and the learning process through innovative use of technology.

*Planning and implementation grants have been awarded to 50 districts and collaboratives that impact 176 districts, most ESC regions, as well as, higher education institutions and private sector entities.*

**EdTech PILOTS:** Currently TEA is conducting educational technology pilots at 13 sites that represent a cross section of Texas elementary, middle and high schools across the state. The primary objective of these pilots is to examine the effectiveness of using various technologies to deliver substantial curriculum content to students and to improve student learning. The pilots will examine the cost and efficacy of using technology to deliver curriculum that has traditionally been delivered through print media. The pilots draw on various technologies and involve hardware and curriculum products from numerous vendors.

TEA has \$2.25 million available for this two-year project. The funds serve as support for the school districts selected to participate in the pilots. Awards, selected through a peer review process, were announced in January of 2000. Results from the pilots will share data related to the impact on students, teachers, campuses, families and communities as well as data on cost and benefits of using the technologies and content.

## ***Funding Level***

FY 99 .....	\$ 500,000
FY 00 .....	\$1,000,000

Current Status of the Long-Range Plan for Technology  
Authorized Under Texas Education Code, Chapter 32

# TECHNOLOGY PREVIEW CENTERS AND TRAINING PROGRAMS

## Preview Centers and Training Programs

TEC 32.036

### TECHNOLOGY PREVIEW CENTERS AND TRAINING PROGRAMS

#### *Description*

Twenty regional education service centers (ESCs) were established in Texas to provide school districts with services that enhance efficiency, effectiveness and the performance of students, teachers, administrators and school personnel.

#### *Purpose*

In the area of educational technology, the ESCs provide planning, consultation, professional development and technical assistance in response to district needs and in support of the State Board of Education's *Long-Range Plan for Technology*. The Texas Education Agency's Educational Technology Division gives financial support to the ESCs to assist them in these endeavors. Through the Technology Preview Centers and Training Programs established by each of the 20 ESCs, program outcomes include development of collaboratives and partnerships, regional network development and operation, education resources preview center, training and professional development services, TLC support, planning and grant development and distance learning opportunities.

Technology professional development is a cornerstone of the services provided by ESCs. A variety of technology workshops are offered by each ESC throughout the year to meet the varied needs of school districts. Educators can learn the basics of technology use, receive training on specific software packages; find educational resources on the Internet; and explore strategies for integrating technology across the curriculum. ESCs also provide TIFTech training, customize training for individual school districts, and provide training via multiple technologies. Educators can view the professional development offerings through ESC Web-based catalogs and register for selected workshops online.

Funding was increased in FY 97 due to the high demand for technology planning and staff development through ESCs.

#### *Funding Level*

FY '93 .....	\$6,000,000
FY '94 .....	\$6,000,000
FY '95 .....	\$6,000,000
FY '96 .....	\$6,000,000
FY '97 .....	\$8,000,000
FY '98 .....	\$8,000,000
FY '99 .....	\$8,000,000
FY '00 .....	\$8,000,000

# Compliance Statement

## **TITLE VI, CIVIL RIGHTS ACT OF 1964; THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS, TYLER DIVISION**

Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

- (1) acceptance policies on student transfers from other school districts;
- (2) operation of school bus routes or runs on a nonsegregated basis;
- (3) nondiscrimination in extracurricular activities and the use of school facilities;
- (4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff members who work with children;
- (5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;
- (6) nondiscriminatory practices relating to the use of a student's first language; and
- (7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have occurred or are occurring.

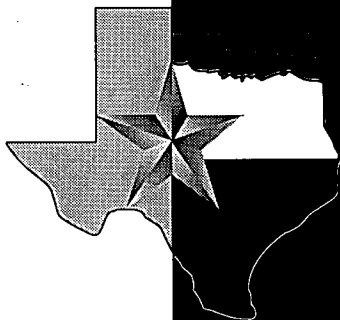
Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, U.S. Department of Education.

If there is a direct violation of the Court Order in Civil Action No. 5281 that cannot be cleared through negotiation, the sanctions required by the Court Order are applied.

## **TITLE VII, CIVIL RIGHTS ACT OF 1964 AS AMENDED BY THE EQUAL EMPLOYMENT OPPORTUNITY ACT OF 1972; EXECUTIVE ORDERS 11246 AND 11375; EQUAL PAY ACT OF 1964; TITLE IX, EDUCATION AMENDMENTS; REHABILITATION ACT OF 1973 AS AMENDED; 1974 AMENDMENTS TO THE WAGE-HOUR LAW EXPANDING THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967; VIETNAM ERA VETERANS READJUSTMENT ASSISTANCE ACT OF 1972 AS AMENDED; IMMIGRATION REFORM AND CONTROL ACT OF 1986; AMERICANS WITH DISABILITIES ACT OF 1990; AND THE CIVIL RIGHTS ACT OF 1991.**

The Texas Education Agency shall comply fully with the nondiscrimination provisions of all federal and state laws, rules, and regulations by assuring that no person shall be excluded from consideration for recruitment, selection, appointment, training, promotion, retention, or any other personnel action, or be denied any benefits or participation in any educational programs or activities which it operates on the grounds of race, religion, color, national origin, sex, disability, age, or veteran status (except where age, sex, or disability constitutes a bona fide occupational qualification necessary to proper and efficient administration). The Texas Education Agency is an Equal Employment Opportunity/Affirmative Action employer.





*Texas Education Agency  
1701 North Congress Avenue  
Austin, Texas 78701-1494*

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